Appl. No. 10/032,721 Amdt. dated September 29, 2004 Reply to Office Action of March 30, 2004

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A magnetic recording medium having a substrate, a magnetic interlayer and a layer of magnetic recording material thereon, the magnetic recording material comprising an initial paramagnetic layer and a final recording layer, wherein the initial paramagnetic layer comprises a Cobalt alloy having a thickness of about 0.9 Å and a noble metal layer having a thickness of about 1 nm.

Claim 2 (original): The magnetic recording medium as recited in claim 1, wherein the noble metal is palladium.

Claim 3 (original): The magnetic recording medium as recited in claim 1, wherein the noble metal is platinum.

Claim 4 (cancel)

· Claim 5 (cancel)

Claim 6 (previously amended): The magnetic recording medium as recited in claim 1, wherein the final recording layer comprises a <u>second</u> Cobalt alloy having a thickness of about 2-6 Å and a <u>second</u> noble metal layer having a thickness about 1nm.

Claim 7 (original): The magnetic recording medium as recited in claim 6, wherein the final recording layer is further comprised of a laminated structure such that the final recording layer includes about 8-20 alternating layers of the <u>second</u> Cobalt alloy and the <u>second</u> noble metal.

Claim 8 (original): The magnetic recording medium as recited in claim 7, wherein the final recording layer comprises 15 alternating layers of the <u>second</u> Cobalt alloy and the <u>second</u> noble metal.

Claim 9 (cancel):

Claim 10 (currently amended): The magnetic recording medium as recited in claim 1 5, wherein the initial paramagnetic layer is further comprised of a laminated structure such the initial paramagnetic layer includes about 1-3 alternating layers of the Cobalt alloy and the noble metal.

Claim 11 (original): The magnetic recording medium as recited in claim 1, wherein the Cobalt alloy is comprised of Cobalt and one or more of the group consisting of boron, chromium, tantalum, francium, platinum, tungsten, manganese, molybdenum, ruthenium, silicon, nickel, copper, or gold.

Claim 12 (previously amended): The magnetic recording medium as recited in claim 1, wherein the Cobalt alloy is comprised of CoCr₄₀.

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Claim 13 (original): A magnetic recording medium comprising:

a substrate;

a soft magnetic underlayer;

a paramagnetic layer; and

a perpendicular recording material including alternating layers of a Cobalt alloy and a noble metal.

Claim 14 (currently amended): A magnetic recording medium comprising:

a substrate;

a soft magnetic underlayer; and

a graded magnetic recording material including alternating layers of an initial paramagnetic Cobalt alloy and a perpendicular recording material having a noble metal.

Claim 15 (currently amended): A magnetic recording medium as recited in claim 14, wherein the graded magnetic material comprises further comprising:

the <u>an</u> initial paramagnetic layer having 1-3 layers of the Cobalt alloy, each Cobalt alloy layer having a thickness of about 0.9 Å and each noble metal layer having a thickness of about 1 nm; and

the final perpendicular recording material having 8-20 layers of the Cobalt alloy, each Cobalt alloy layer having a thickness of about 2-6 Å and each noble metal layer having a thickness of about 1 nm.

Claim 16 (previously amended): A magnetic recording medium as recited in claim 15, wherein the Cobalt alloy is further comprised of $CoCr_{40}$.

Claim 17 (original): A magnetic recording medium as recited in claim 15, wherein the Cobalt alloy is further comprised of Cobalt and boron, chromium, tantalum, francium, platinum, tungsten, manganese, molybdenum, ruthenium, silicon, nickel, copper, or gold.

Claim 18 (original): A magnetic recording medium as recited in claim 16 or 17, wherein the noble metal is palladium.

Claim 19 (original): A magnetic recording medium as recited in claim 16 or 17, wherein the noble metal is platinum.

Claim 20 (new): A magnetic recording medium having a substrate, a magnetic interlayer and a layer of magnetic recording material thereon, the magnetic recording material comprising a

paramagnetic Cobalt alloy of less than 1.5 Å and a final recording layer of about 2-6 Å in thickness.

Claim 21 (new): A magnetic recording medium as recited in claim 20, wherein the paramagnetic Cobalt alloy is about 0.9 Å in thickness.

Claim 22 (new): A magnetic recording medium as recited in claim 20, wherein the final recording layer is further comprised of alternating layers of a second Cobalt alloy and a noble metal.

Claim 23 (new): A magnetic recording medium as recited in claim 22, wherein the second Cobalt alloy layers are each approximately 2-6 Å and the noble metal layers are each about 8-15 Å thick.

Claim 24 (new): A magnetic recording medium as recited in claim 23, wherein each second Cobalt alloy layer is about 3 Å thick and each noble metal layer is about 1 Å in thickness.

Claim 25 (new): A magnetic recording medium as recited in claim 24, wherein the noble metal is palladium.

Claim 26 (new): A magnetic recording medium having a substrate, a magnetic interlayer and a layer of magnetic recording material thereon, the magnetic recording material comprising an initial paramagnetic layer and a final recording layer, wherein the initial paramagnetic layer comprises a Cobalt alloy having a thickness of less than 1.5 Å and a noble metal layer having a thickness of about 1 nm.

Claim 27 (new): A magnetic recording medium, comprising:

- (a) an initial paramagnetic material layer comprising alternating layers of Cobalt alloy and noble metal, wherein the Cobalt alloy layers are less that 1.5 angstroms; and
- (b) a final recording multilayer comprising alternating layers of Cobalt alloy and noble metal, wherein the Cobalt alloy layers of the final recording multilayer are thicker than the Cobalt alloy layers of the initial paramagnetic layer such that there is no magnetic coupling between the neighboring grains of the Cobalt layers of the initial paramagnetic material layer.

Claim 28 (new): The magnetic recording medium of Claim 27, wherein the noble metal layers of the initial paramagnetic layers are about 1 nm.

Claim 29 (new): The magnetic recording medium of Claim 27, wherein the Cobalt alloy layers of the final recording multilayer are about 3 angstroms.

Claim 30 (new): The magnetic recording medium of Claim 27, wherein the noble metal layers of the final recording multilayer are between approximately 8 angstroms and approximately 15 angstroms in thickness.

Claim 31 (new): A magnetic recording medium, comprising:

- (a) an initial paramagnetic material layer comprising alternating layers of Cobalt alloy and noble meta; and
- (b) (b) a final recording multilayer comprising alternating layers of Cobalt alloy and noble metal, wherein the Cobalt alloy layers of the final recording multilayer are thicker than the Cobalt alloy layers of the initial paramagnetic layer such that there is no magnetic coupling between the neighboring grains of the Cobalt layers of the initial paramagnetic material layer.